AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, or claims in the application.

1. – 10. (Cancelled).

11. (Currently amended) An artificial full-thickness corneal transplant support ~~consisting essentially of~~ comprising:

a) a base biopolymer having the thickness of approximately an average cornea, and having the shape of a cornea, with a convex and concave side and suitable for implantation onto a damaged cornea; and

b) ~~said~~ the biopolymer having incorporated within it an attachment reagent ~~comprising~~ consisting essentially of one or more of the following compounds: laminin, fibronectin, RGDS (SEQ ID NO: 1), bFGF conjugated with polycarbophil, and EGF conjugated with polycarbophil~~; and~~

~~c) said biopolymer having the shape of a cornea, with a convex and concave side and suitable for implantation onto a damaged cornea~~.

12. (Original) The composition of claim 11, wherein the biopolymer is comprised of collagen IV.

13. (Currently amended) An artificial full-thickness corneal transplant ~~consisting essentially of~~ comprising:

a) a base biopolymer having the thickness of approximately an average cornea, and having the shape of a cornea, with a convex and concave side and suitable for implantation onto a damaged cornea;

b) ~~said~~ the biopolymer having incorporated within it an attachment reagent ~~comprising~~ consisting essentially of one or more of the following

compounds: laminin, fibronectin, RGDS (SEQ ID NO: 1), bFGF conjugated with polycarbophil, and EGF conjugated with polycarbophil~~; and~~

~~c) said biopolymer having the shape of a cornea, with a convex and concave side and suitable for implantation onto a damaged cornea~~.

d) a confluent layer of human corneal endothelial cells on the convex side of the biopolymer; and

e) said transplant suitable for implantation onto a damaged cornea.

14. (Currently amended) An artificial half-thickness corneal transplant support ~~consisting essentially of~~ comprising:

a) a base biopolymer having the thickness of approximately one half of an average cornea, and having the shape of a cornea, with a convex and concave side and suitable for implantation onto a damaged cornea; and

b) ~~said~~ the biopolymer having incorporated within it an attachment reagent ~~comprising~~ consisting essentially of one or more of the following compounds: laminin, fibronectin, RGDS (SEQ ID NO: 1), bFGF conjugated with polycarbophil, and EGF conjugated with polycarbophil~~; and~~

~~c) said biopolymer having the shape of a cornea, with a convex and concave side and suitable for implantation onto a damaged cornea~~.

15. - 16. (Cancelled).

17. (Previously presented) The artificial corneal transplant support of claim 11, wherein the biopolymer is non-swelling in the presence of culture media.

18. – 26. (Cancelled).

27. (Previously presented) The artificial full-thickness corneal transplant support of claim 11, wherein said biopolymer is coated with diamond like carbon.

28. (Previously presented) The artificial full-thickness corneal transplant of claim 13, wherein said biopolymer is coated with diamond like carbon.